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Repetitive stimulation and its affect on both temporal and non-temporal judgements

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Abstract

There is an increasing weight of evidence that there may exist a fundamental link between our perception of time (and internal clock speed), and the rate at which we can process information. Numerous studies have shown that repetitive stimulation either in the form of clicks, or visual flickers, can alter judgement of duration, typically making estimations of duration longer relative to situations where there are no clicks or flickers presented (Droit-Volet & Wearden, 2002; Jones et al., 2011; Penton-Voak et al., 1996; Treisman et al., 1990; Wearden et al., 1999). Some studies have interpreted this as evidence of a manipulation of internal clock speed. More recently it has been shown that this same type of repetitive stimulation can also affect reaction time and memory encoding (Jones et al., 2011), the perception of velocity (Makin et al., 2012, 2013), and the judgement of line length and number (although only when presented sequentially; Droit-Volet, 2010). This talk will make the argument that the key to understanding these effects, and whether these different types of judgement are indeed related, lies in understanding the mechanism of action of the repetitive stimulation.

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Keywords: Temporal judgements; Repeptitive stimulation; Reaction time; Click trains; Flickers; Time perception

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